any test engine or vehicle, it relinquishes the prerogative to conduct retests as provided in § 86.1008–84(i).

[45 FR 63772, Sept. 25, 1980, as amended at 48 FR 52208, Nov. 16, 1983]

§ 86.1008–90 Test procedures.

(a)(1)(i) For heavy-duty engines, the prescribed test procedure is the Federal Test Procedure, as described in subparts N, I, and P of this part.

(ii) For heavy-duty vehicles with a GVW of less than 14,000 pounds (6,400 kilograms), the prescribed test procedure is the Fuel Dispensing Spitback Test as described in 86.1246–96 of this part. The test for fuel spitback is conducted as a stand-alone test, thus all references to the test sequence described in figure M96–1 of subpart M of this part can be ignored.

(iii) During the testing of heavy-duty diesel engines, the manufacturer shall decide for each engine, prior to the start of the initial cold cycle, whether the measurement of background particulate is required for the cold and hot cycles to be valid. The manufacturer may choose to have different requirements for the cold and hot cycles. If a manufacturer chooses to require the measurement of background particulate, failure to measure background particulate shall void the test cycle regardless of the test results. If a test cycle is void, the manufacturer shall retest using the same validity requirements of the initial test.

(2) For light-duty trucks, the prescribed test procedure is the Federal Test Procedure as described in subparts B, P, and/or C of this part. The manufacturer shall not perform the evaporative emission test procedures contained in subpart B of this part. The Administrator may, based on advance application by a manufacturer, approve optional test procedures for use in Selective Enforcement Audit testing.

(3) When testing light-duty trucks the following exceptions to the test procedures in subpart B are applicable:

(i) For mileage accumulation, the manufacturer may use test fuel meeting the specifications of mileage and service accumulation fuels of § 86.113. Otherwise, the manufacturer may use fuels other than those specified in this section only with the advance approval of the Administrator.

(ii) The manufacturer may measure the temperature of the test fuel at other than the approximate mid-volume of the fuel tank, as specified in § 86.131–96(a) with only a single temperature sensor, and may drain the test fuel from other than the lowest point of the tank, as specified in § 86.131–96(b), provided an equivalent method is used. Equivalency documentation shall be maintained by the manufacturers and shall be made available to the Administrator upon request.

(iii) The manufacturer may perform additional preconditioning on SEA test vehicles other than the preconditioning specified in § 86.132 only if the additional preconditioning had been performed on certification test vehicles of the same configuration.

(iv) If the Administrator elects to use the evaporative canister preconditioning procedure described in § 86.132–96(k), the manufacturer shall perform the heat build procedure 11 to 34 hours following vehicle preconditioning rather than according to the time period specified in § 86.133–90(a). All references in § 86.133–90 to an evaporative emission enclosure (SHED) and analyzing for HC during the heat build can be ignored.

(v) The manufacturer may substitute slave tires for the drive wheel tires on the vehicle as specified in paragraph (e) of § 86.135–90: *Provided,* that the slave tires are the same size.

(vi) If the Administrator elects to use the evaporative canister preconditioning procedure described in § 86.132–96(k), the cold start exhaust test described in § 86.137 shall follow the heat build procedure described in § 86.133–90 by not more than one hour.

(vii) In performing exhaust sample analysis under § 86.140.

(A) When testing diesel vehicles or methanol-fueled vehicles, the manufacturer shall allow a minimum of 20 minutes warm-up for the HC analyzer, and a minimum of 2 hours warm-up for the CO, CO_2 and NO_X analyzers. (Power is normally left on infrared and chemiluminescent analyzers. When not in use, the chopper motors of the infrared analyzers are turned off and the phototube high voltage supply to the

chemiluminescent analyzers is placed in the standby position.)

(B) The manufacturer shall exercise care to prevent moisture from condensing in the sample collection bags.

(viii) The manufacturer need not comply with §86.142, since the records required therein are provided under other provisions of subpart K of this part.

(ix) In addition to the requirements of subpart B of this part, the manufacturer shall prepare gasoline-fueled vehicles and methanol-fueled vehicles as follows prior to exhaust emission testing:

(A) The manufacturer shall inspect the fuel system to insure the absence of any leaks of liquid or vapor to the atmosphere by applying a pressure of 14.5 + 0.5 inches of water to the fuel system, allowing the pressure to stabilize, and isolating the fuel system from the pressure source. Following isolation of the fuel system, pressure must not drop more than 2.0 inches of water in five minutes. If required, the manufacturer shall perform corrective action in accordance with §86.1008 and report this action in accordance with §86.1009.

(B) When performing this pressure check, the manufacturer shall exercise care to neither purge nor load the evaporative emission control system.

(C) The manufacturer shall not modify the test vehicle's evaporative emission control system by component addition, deletion, or substitution, except to comply with paragraph (a)(4)(ii) of this section if approved in advance by the Administrator.

(4) The Administrator, may on the basis of a written application by a manufacturer, prescribe minor test procedure variations from those set forth in paragraphs (a)(1) and (a)(2) of this section for any heavy-duty engine.

(5) When testing light-duty trucks, the following exceptions to the test procedures in subpart C of this part are applicable:

(i) The manufacturer may measure the temperature of the test fuel at other than the approximate mid-volume of the fuel tank as specified in §86.231(a) and may drain the test fuel from other than the lowest point of the fuel tank as specified in §86.231(b) provided an equivalent method is used. Equivalency documentation shall be maintained by the manufacturer and shall be made available to the Administrator upon request.

(ii) In performing exhaust sample analysis under §86.240, the manufacturer shall exercise care to prevent moisture from condensing in the sample collection bags.

(iii) The manufacturer need not comply with §86.242 since the records required therein are provided under other provisions of subpart K of this part.

(iv) In addition to the requirements of subpart C of this part, the manufacturer shall prepare gasoline-fueled vehicles as follows prior to exhaust emission testing.

(A) The manufacturer shall inspect the fuel system to ensure the absence of any leaks of liquid or vapor to the atmosphere by applying a pressure of 14.5±0.5 inches of water (3.6±0.1 kPa) in the fuel system allowing the pressure to stabilize and isolating the fuel system from the pressure sources. Following isolation of the fuel system, pressure must not drop more than 2.0 inches of water (0.5 kPa) in 5 minutes. If required, the manufacturer shall perform corrective action in accordance with paragraph §86.1008(d) and report this action in accordance with paragraph §86.1009(d).

(B) When performing this pressure check, the manufacturer shall exercise care to neither purge nor load the evaporative emission control system.

(C) The manufacturer shall not modify the test vehicle's evaporative emission control system by component addition, deletion, or substitution, except if approved in advance by the Administrator to comply with paragraph (a)(5)(i) of this section.

(b)(1) The manufacturer shall not adjust, repair, prepare, or modify the engines or vehicles selected for testing and shall not perform any emission tests on engines or vehicles selected for testing and shall not perform any emission tests on engines or vehicles selected for testing pursuant to the test order unless this adjustment, repair, preparation, modification, and/or tests are documented in the manufacturer's

engine or vehicle assembly and inspection procedures and are actually performed or unless these adjustments and/or test are required or permitted under this subpart or are approved in advance by the Administrator.

(2) For 1984 and later model years the Administrator may adjust or cause to be adjusted any engine parameter which the Administrator has determined to be subject to adjustment for certification, Selective Enforcement Audit, and Production Compliance Audit testing in accordance with §86.090–22(e)(1), to any setting within the physically adjustable range of that parameter, as determined by the Administrator in accordance with §86.090–22(e)(3)(ii), prior to the performance of any tests. However, if the idle speed parameter is one which the Administrator has determined to be subject to adjustment, the Administrator shall not adjust it to any setting which causes a lower engine idle speed than would have been possible within the physically adjustable range of the idle speed parameter if the manufacturer had accumulated 125 hours of service on the engine or 4,000 miles on the vehicle under paragraph (c) of this section, all other parameters being identically adjusted for the purpose of the comparison. The manufacturer may be requested to supply information to establish such an alternative minimum idle speed. The Administrator, in making or specifying these adjustments, may consider the effect of the deviation from the manufacturer's recommended setting on emissions performance characteristics as well as the likelihood that similar settings will occur on in-use heavy-duty engines or light-duty trucks. In determining likelihood, the Administrator may consider factors such as, but not limited to, the effect of the adjustment on engine or vehicle performance characteristics and surveillance information from similar in-use engines or vehicles.

(c) Prior to performing exhaust emission testing on an SEA test engine, the manufacturer may accumulate on each engine a number of hours of service equal to the greater of 125 hours or the number of hours the manufacturer accumulated during certification on the emission-data engine corresponding to the configuration specified in the test order. Prior to performing exhaust emission testing on an SEA test vehicle, the manufacturer may accumulate a number of miles equal to the greater of 4,000 miles or the number of miles the manufacturer accumulated during certification on the emission data vehicle corresponding to the configuration specified in the test order.

(1) Service or mileage accumulation must be performed in a manner using good engineering judgment to obtain emission results representative of normal production vehicles. This service or mileage accumulation must be consistent with the new vehicle break-in instructions contained in the applicable vehicle owner's manual, if any.

(2) The manufacturer shall accumulate service at a minimum rate of 16 hours per engine or mileage at a minimum rate of 300 miles per vehicle during each 24-hour period, unless otherwise provided by the Administrator.

(i) The first 24 hour period for service or mileage accumulation shall begin as soon as authorization checks, inspections and preparations are completed on each engine or vehicle.

(ii) The minimum service or mileage accumulation rate does not apply on weekends or holidays.

(iii) If the manufacturer's service or mileage accumulation target is less than the minimum rate specified (16 hours or 300 miles per day), then the minimum daily accumulation rate shall be equal to the manufacturer's service or mileage accumulation target.

(3) Service or mileage accumulation shall be completed on a sufficient number of test engines or vehicles during consecutive 24-hour periods to assure that the number of engines or vehicles tested per day fulfills the requirements of paragraph (g) of this section.

(d) The manufacturer shall not perform any maintenance on test vehicles or engines after selection for testing, nor shall the Administrator allow deletion of any test vehicle or engine from the test sequence, unless requested by the manufacturer, and approved by the Administrator before any test vehicle or engine maintenance or deletion.

(e) The manufacturer shall expeditiously ship test engines or vehicles

from the point of selection to the test facility. If the test facility is not located at or in close proximity to the point of selection, the manufacturer shall assure that test engines or vehicles arrive at the test facility within 24 hours of selection: *Except,* that the Administrator may approve more time based upon a request by the manufacturer accompanied by a satisfactory justification.

(f) If an engine or vehicle cannot complete the service or mileage accumulation or emission test because of a malfunction, the manufacturer may request that the Administrator authorize the repair of that engine or vehicle or its deletion from the test sequence.

(g) Whenever a manufacturer conducts testing pursuant to a test order issued under this subpart, the manufacturer shall notify the Administrator within one working day of receipt of the test order which test facility will be used to comply with the test order. If no test cells are available at a desired facility, the manufacturer must provide alternate testing capability satisfactory to the Administrator.

(1) Heavy-duty engine manufacturers with projected sales for the United States market for that year of 30,000 or greater shall complete emission testing at their facility on a minimum of two engines per 24-hour period, including each voided test and each diesel engine smoke test.

(2) Heavy-duty engine manufacturers with projected sales for the United States market for that year of less than 30,000 shall complete emission testing at their facility on a minimum of one engine per 24-hour period, including each voided test and each diesel engine smoke test.

(3) Light-duty truck manufacturers shall complete emission testing at their facility on a minimum of four engines per 24-hour period, including each voided test.

(4) The Administrator may approve a lower daily rate of conducting emission tests based upon a request by a satisfactory justification.

(h) The manufacturer shall perform test engine or vehicle selection, shipping, preparation, service or mileage accumulation, and testing in such a manner as to assure that the audit is performed in an expeditious manner.

(i) The manufacturer may retest any engines or vehicles tested during a Selective Enforcement Audit once a fail decision for the audit has been reached in accordance with §86.1010–84(d) based on the first test on each engine or vehicle: *Except,* that the Administrator may approve retesting at other times based upon a request by the manufacturer accompanied by a satisfactory justification. The manufacturer may test each engine or vehicle a total of three times. The manufacturer shall test each engine or vehicle the same number of times. The manufacturer may accumulate additional service or mileage before conducting a retest, subject to the provisions of paragraph (c) of this section.

[54 FR 14560, Apr. 11, 1989, as amended at 57 FR 31922, July 17, 1992; 58 FR 16046, Mar. 24, 1993; 62 FR 47123, Sept. 5, 1997]

§ 86.1008–96 Test procedures.

Section 86.1008–96 includes text that specifies requirements that differ from §86.1008–90. Where a paragraph in §86.1008–90 is identical and applicable to §86.1008–96, this is indicated by specifying the corresponding paragraph and the statement "[Reserved]. For guidance see §86.1008–90." Where a corresponding paragraph of §86.1008–90 is not applicable, this is indicated by the statement "[Reserved]."

(a)(1)(i) For heavy-duty engines, the prescribed test procedure is the Federal Test Procedure, as described in subparts N, I, and P of this part.

(ii) During the testing of heavy-duty diesel engines, the manufacturer shall decide for each engine, prior to the start of the initial cold cycle, whether the measurement of background particulate is required for the cold and hot cycles to be valid. The manufacturer may choose to have different requirements for the cold and hot cycles. If a manufacturer chooses to require the measurement of background particulate, failure to measure background particulate shall void the test cycle regardless of the test results. If a test cycle is void, the manufacturer shall retest using the same validity requirements of the initial test.